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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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RALPH E. JOCKE
walker & jocke LPA
231 SOUTH BROADWAY
MEDINA, OH 44256

EXAMINER	
HESS, DANIEL A	

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,813	RAMACHANDRAN ET AL.	
	Examiner	Art Unit	
	Daniel A. Hess	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *38* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to 7/7/05 filing by the applicant.

Remarks

The examiner regrets the error he made by accidentally using the term restriction. What he intended was to simply maintain the election of species requirement, as per the Office Action dated 2/23/2005. The examiner also regrets any inconvenience or confusion he may have caused to the applicant, and thanks the applicant for his patience in this matter.

Therefore claim 38 is considered subject to election requirement only, but not restriction requirement.

Nevertheless, the result is still that claim 38 will not be examined at this time, as the applicant has elected the other group.

Response to Arguments

Applicant's arguments filed 7/7/05 have been fully considered but they are not persuasive. In particular, the examiner wishes to make three points:

Firstly, claim 1 uses the language that radiation emitting and sensing devices are 'adjacent the slot.' The term 'adjacent' is a fairly broad term that doesn't give any relative direction or distance and thus allows considerable leeway in terms of the specific placement of the emitting and sensing devices.

Secondly, and importantly (see Mair et al. (US 6,367,695) column 5, line 40), detection of a "false card reader slot" is contemplated in the prior art. This clearly implies that the radiation emitting and devices of Mair et al. are in the vicinity of the slot in at least one embodiment.

Thirdly, and perhaps most importantly, Mair et al. teaches (column 5, lines 19-26) :

"Located behind the card reader slot 12 is an infra-red detector 102, connected to a power source 104 and an encoder 106."

and

"In this example the detector 102 is positioned at the top edge of slot 12"

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mair et al. (US 6,367,695).

Re claim 1: [Note: For many of the instant claims, Mair et al. may be a 102 reference. The courts have found that anticipation is the epitome of obviousness, and therefore a 102

reference can also be the basis for a 103 rejection.] An ATM machine is shown (figure 1), with a housing, a user interface, an input device 16 and at least one output device 18 or 20. There is a card reader slot 12 and associated card reader. There is (figure 2; see associated text) a radiation emitter 34 and detector 40 (see column 4, lines 45-60) for infrared radiation.

Mair teaches (columns 4 and 5):

"FIG. 2 shows a schematic cross-section of a fascia of an ATM 30, including an arrangement in accordance with an embodiment of the present invention whereby such attempted frauds may be detected. Located beneath the keypad 16 is an infra-red emitter 34, connected to a power source 36 and an encoder 38. Located vertically above the emitter 34 in the ATM fascia is an infra-red detector 40, connected to the power source 36 and a decoder 42. Both the encoder 38 and decoder 42 are linked to a comparator 44. In this example the emitter 34 is positioned beneath the keypad 16, portions of which are infra-red transparent, such that the emitter 34 is concealed. The detector 40 is concealed behind an infra-red transparent monitor screen 46.

Coded signals are emitted by the emitter 34 at timed intervals, which signals pass through the keypad 16 to the detector 40. The detected signals are passed to the decoder 42 which communicates with the comparator 44 to confirm that the detected signals correspond to those emitted by the emitter 34.

If a false keypad 21 is placed over the ATM keypad 16, the signals from the emitter 34 are interrupted and do not reach the detector 40. This condition causes the comparator 44 to issue an alarm signal to activate an alarm circuit 48 and thus alert the ATM operator, and de-activate the ATM.

To accommodate normal usage of the ATM 30, the comparator 44 incorporates a time delay which prevents the issue of an alarm signal until the detector 40 has not received signals from the emitter 34 for a predetermined interval. The interval is selected such that use of the keypad 16 by a user, which will result in interruption of the signals reaching the detector 40, will not result in issue of spurious alarm signals.

It will be apparent to those of skill in the art that the embodiment of the invention as described above serves to prevent attempted frauds utilizing false keyboards to obtain users' PINs.

FIG. 3 shows a schematic cross-section of a fascia of an ATM 100, including an arrangement in accordance with a second embodiment of the present invention whereby attempted fraud by overlaying a card reader may be detected. Located behind the card reader slot 12 is an infra-red detector 102, connected to a power source 104 and an encoder 106. Located vertically above the detector 102 in the ATM fascia is an infra-red emitter 108, connected to the power source 104 and a decoder 110. Both the encoder 106 and decoder 110 are linked to a comparator 112. In this example the detector 102 is positioned at the top edge of slot 12 behind a fascia portion 114 which is transparent to infra-red radiation, but not transparent to visible light, such that the detector 102 is concealed from a user's view by portion 114. The emitter 108 is concealed behind an infra-red transparent monitor screen 116 and emits infra-red radiation over a wide angle.

Coded signals are emitted by the emitter 108 at timed intervals, which signals pass through portion 114 to the detector 102. The detected signals are

passed to the decoder 106 which communicates with the comparator 112 to confirm that the detected signals correspond to those emitted by the emitter 108.

If a false sheet 118 (shown in FIG. 3 by a broken line) having a false card reader slot is placed over the lower part of the ATM, the signals from the emitter 108 are interrupted and do not reach the detector 102. This condition causes the comparator 112 to issue an alarm signal to activate an alarm circuit 120 and thus alert the ATM operator, and de-activate the ATM."

Comparator 44 is connected to an alarm 48 and constitutes the recited controller configuration.

Mair et al. teaches (column 5, lines 19-26) :

"Located behind the card reader slot 12 is an infra-red detector 102, connected to a power source 104 and an encoder 106."

and

"In this example the detector 102 is positioned at the top edge of slot 12"

Re claim 2: Naturally the ATM can dispense currency.

Re claim 3: Mair et al. teaches (column 5, lines 50-65):

" It will be apparent that various modifications and improvements may be made to the arrangements described above without departing from the scope of the invention. For example, **any suitable form of signal** may be used to detect the presence of an unauthorized keyboard or the like, in addition to or **as an**

alternative to infra-red emissions. Further, the relative location of the emitter and detector may be varied; or a signal may be passed **across the surface of a keypad**, rather than through the keypad. "

Clearly in this arrangement it would have been obvious to employ visible light for at least the reason that it can deter would-be thieves from even attempting to tamper with the ATM.

Re claim 4: The emitter works on an essentially intermittent basis, and this will at times be on insertion and withdrawal.

Re claims 5 and 6: Clearly (column 3, lines 55-65) a comparison is made between two states 'object present' and 'object absent': This requires a data store having at least a baseline for comparing these two states.

Re claim 7: In the event of a detection event (column 5, lines 40-45) an ATM operator is notified.

Re claim 8: ATM is deactivated if an object is detected, this would certainly somehow, be reflected on the user interface.

Re claim 9: This would have been obvious because blocking of the sensors may be accidental, and the user will wonder otherwise why an alarm is suddenly going off.

Re claim 10: The limitations of the claim actually say very little. In particular, a computer processor memory changes all the time.

Re claim 11: The phrase "surroundingly illuminate" is broad and do not reflect any particular illumination pattern; an LED emitter, which is the simplest kind, can be expected to "surroundingly illuminate."

Re claim 12: See discussion re claims 5/6.

Re claim 13: One feature (column 5, lines 45-55) is that under certain circumstances of normal use, interruption of the signals will not lead to an alarm. This is a form of fuzzy logic.

Re claim 14: See figure 2.

Re claim 15: This feature of 'extending in surrounding relation' is illustrated by the concavity of the ATM shown in figure 1.

Re claim 16: See discussion re claim 1. As for controller 'selectively causing the sensing device to operate,' note that (column 5, lines 30-40) signals from the sensing device are intermittent.

As for the newly added limitations, it is already understood that a controller inside ATM of Mair et al. both prompts card input and controls the fraud detection system, which is the gist of these limitations.

Re claims 17 and 18: See discussion re claim 1 above.

Re claim 19: See discussion re claims 1 and 16 above. Note especially Mair et al. teaches (column 5, lines 19-26) :

"In this example the detector 102 is positioned at the top edge of slot 12"

Re claims 20-22: See discussion re claims 5-9 above.

Re claim 23: See discussion re claim 1 above, as well as discussion of fuzzy logic re claim 13 above.

Re claim 24: See discussion re claim 14 above. Also note that it is clear that the transmitter and detector should be on opposite sides of the slot, for if they are on the same side of the slot, a fraudulent device need not break the beam.

Re claim 25: See discussion re claim 11, above.

Re claim 26: See discussion re claims 1 and 16 above.

Re claim 27/28: See discussion re claim 9, above.

Re claim 29: See figure 2 of Mair et al. Also note that it is clear that the transmitter and detector should be on opposite sides of the slot, for if they are on the same side of the slot, a fraudulent device need not break the beam.

Re claim 30/31: See discussion re claims 5/6.

Re claim 32: See discussion re claims 1 and 16.

Re claim 33: See discussion re claim 4, above.

Re claim 34: See discussion re claim 11, and note that currency dispensing is inherent for the machine is an ATM.

Re claim 35: In Mair et al. the machine deactivates if there is a detection of an illicit reading device (column 5, line 45). If the card is in the ATM when it is deactivated it would likely remain in the ATM.

Re claim 36: Records are normally kept of ATM transactions; if a machine is compromised, this would normally be traceable, and the natural response by a user to knowledge

that their account may have been compromised would have been to cancel the account. This examiner has taken that kind of action in the past.

Re claim 37: See discussion re claim 36: If a user is not sure if their account has been compromised, the natural response by the user would have been to monitor the account over a period of time to determine whether the account has been compromised. This examiner has taken that kind of action in the past.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Hess whose telephone number is (571) 272-2392. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DH
9/29/05

THIEN M. LE
PRIMARY EXAMINER